



Charles Gause, SVP Corporate Development
Luna Innovations Incorporated
gausec@lunainnovations.com

July 2010

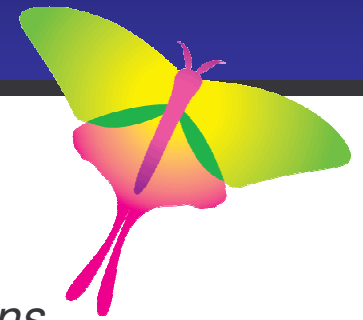


Safe Harbor Statement

This presentation includes “forward-looking statements” within the meaning of the Securities Litigation Reform Act of 1995. These statements include but are not limited to our plans, objectives, expectations and intentions and other statements that contain words such as “expects,” “contemplates,” “anticipates,” “plans,” “intends,” “believes” and variations of such words or similar expressions that predict or indicate future events or trends, or that do not relate to historical matters. These statements are based on our current beliefs or expectations and are inherently subject to significant uncertainties and changes in circumstances, many of which are beyond our control. There can be no assurance that our beliefs or expectations will be achieved. Actual results may differ materially from our beliefs or expectations due to economic, business, competitive, market and regulatory factors.



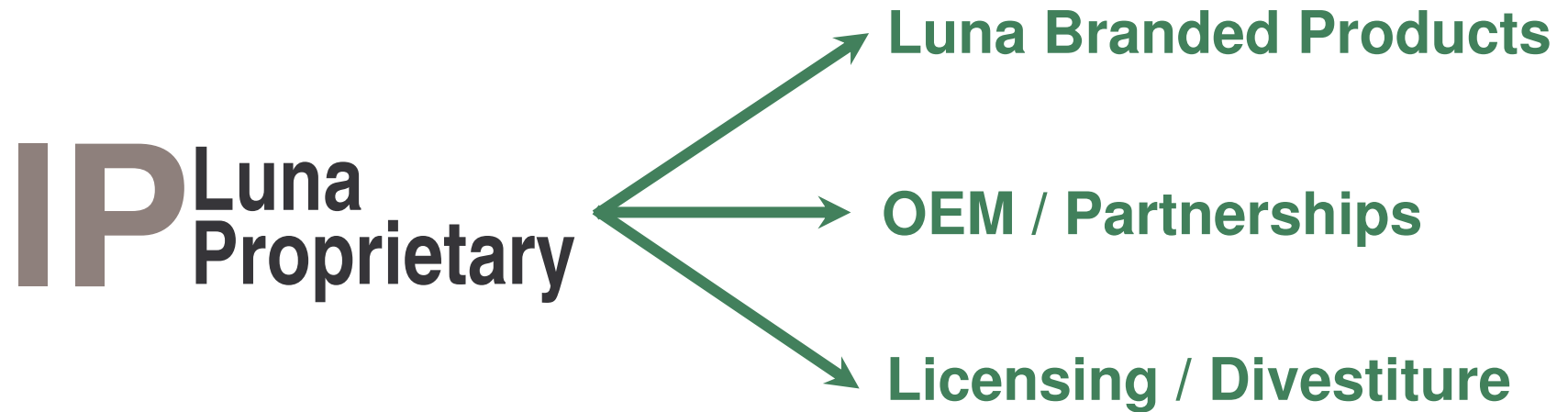
Company Summary



- Developing next-generation products for growth markets
 - *200 employees dedicated to transitioning science to solutions*
- 4 Locations in Virginia – Blacksburg, Charlottesville, Danville, Roanoke
- NASDAQ: LUNA
- Reputation for excellence in applied research
- Demonstrated track record of successful commercialization
 - *Accelerating product and licensing revenue*
 - *Created five companies and sold three to leaders in their fields*



Luna Business Model

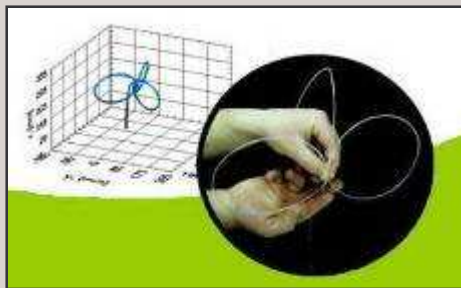


Core Technologies

Fiber Optic Sensing

Distributed sensing technology enabling fiber optic mapping

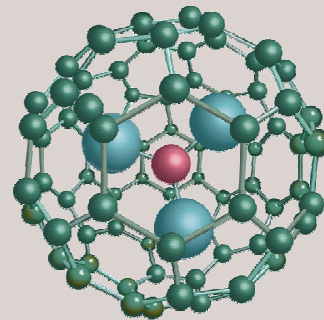
- *Strain, Pressure*
- *Temperature*
- *Position, Shape*



Carbon Nanomaterials

Nanotechnology-enabled solutions for targeted applications

- *Diagnostics*
- *Therapeutics*
- *Solar Energy*



Luna nanoWorks' Division



**Making products empowered
by nanomaterials**

Luna nanoWorks, is a division
of Luna Innovations, located
in Danville, Virginia

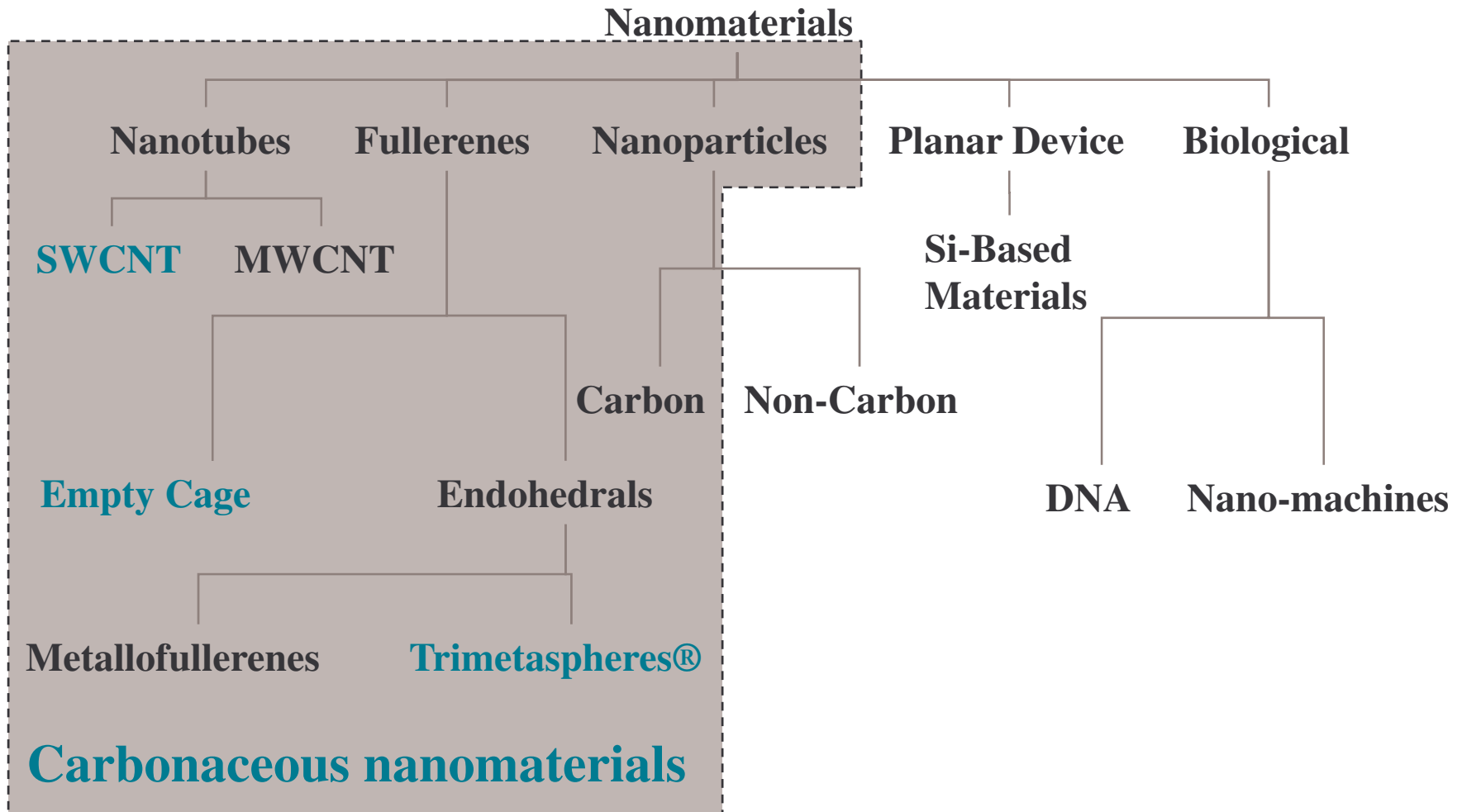


nanoWorks Focus

- Produce nanomaterials
- Advance manufacturing
- Create new nanomaterials
- Identify applications
- Product development



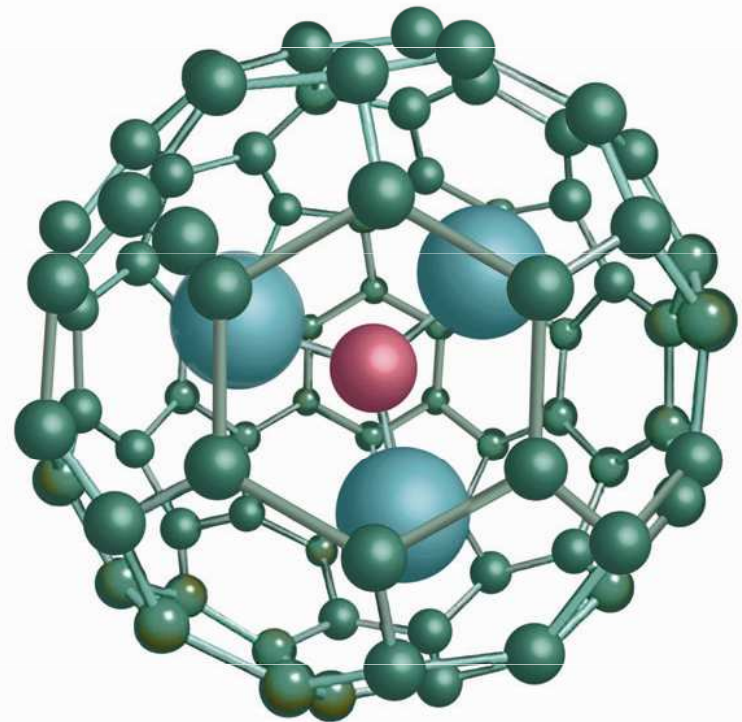
Nanomaterials of Interest



Trimetaspheres®

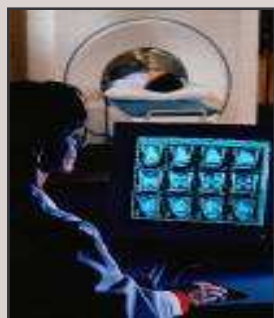
- A sphere of 80 carbon atoms enclosing a metal nitride core
- Strong IP – Virginia Tech COM
- Unique physical properties:
 - Chemical – Biological
 - Thermal – Optical
 - Magnetic – Electronic

TRIMETASPHERE® Luna's Exclusive Carbon Nanomaterials



LnW Product Development

Diagnostics



Imaging agents providing enhanced contrast and better safety:

- MRI
- MRI targeted (i.e. plaque, brain, etc.)

Therapeutics



A new pathway to treating disease:

- Parkinson's
- Diabetes
- Arthritis
- Wound Healing
- Radiation Therapy
- Dermatology

Energy



Providing for more efficient & less expensive organic solar power solutions.

Diagnostic Pharmaceuticals

- Performance:
High relaxivity = lower dose
- Safety:
Recent FDA warnings
- Market Segments:
General
Disease-targeting agents
(plaque, tumors, disease states)
- NIH partnership

HYDROCHALARONE™ Imaging Results in Animal Models

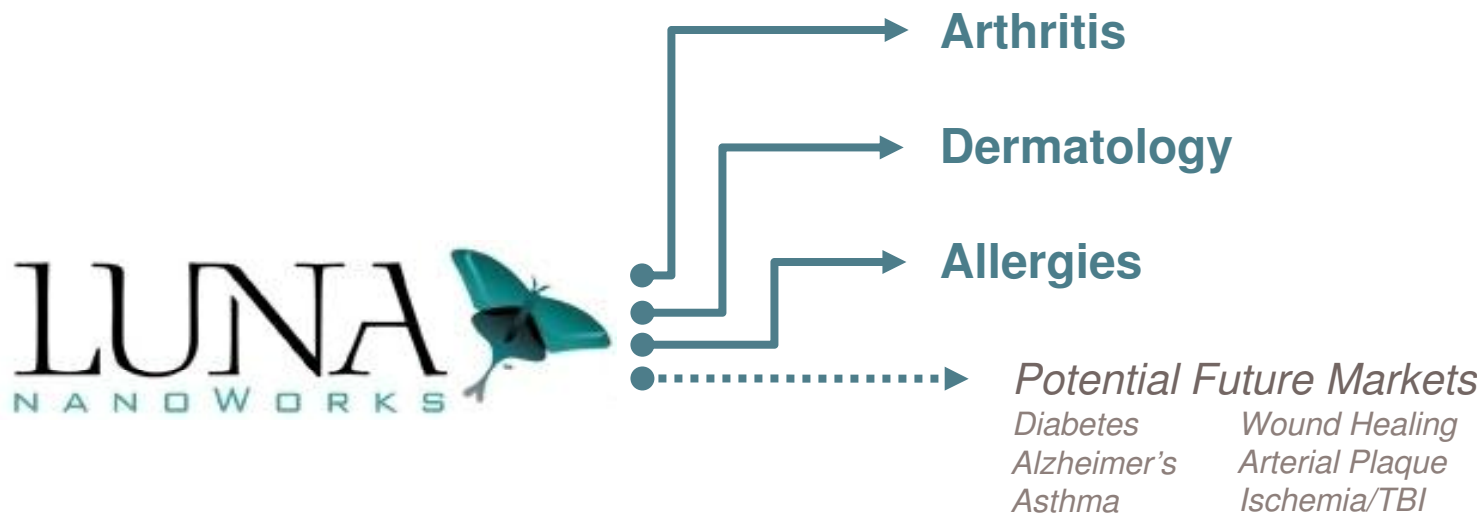
Before Agent

30 Minutes After



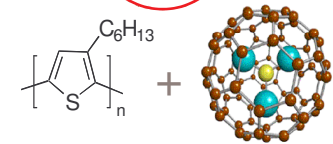
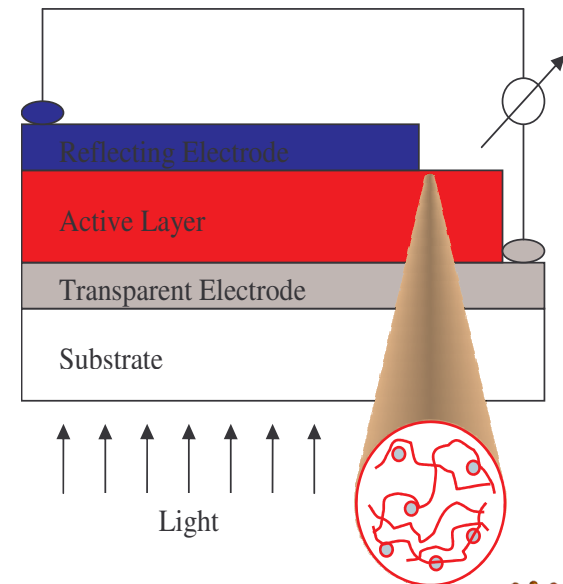
Therapeutic Pharmaceuticals

- Luna is developing a portfolio of therapeutic candidates
 - *Single platform technology – modified antioxidant nanomaterials*
 - *Compounds intercept and absorb pathogenic free radicals*
- Potential to treat a wide range of diseases and disorders



Polymer Solar Cells (OPV)

- Polymers are hole carriers
- Trimetaspheres® are electron carriers
- Build networks of polymer and Trimetaspheres® for best efficiency
- Open circuit voltage (V_{oc}) improvement



Danville 2004 – Economic View

- Southern Virginia:
 - *Unemployment: region at 13% compared to 3.7% for Virginia (prior to Pillowtex exiting)*
 - *Aging population & outward migration of youth*
 - *Old Economy: low-wage, low-skill industries that face severe competition from foreign competitors*



“A century ago, Danville stood at the cusp of a new century as a key center of manufacturing and commerce in Southside Virginia.”

**Rebuilding Danville
Virginia Business, April 2003**

*Source: Sec. Schewel's Comments in
Chmura Report, July 2003 Summit*

Danville - Post Luna

Unemployment: below 10%
 Approximately 30 new projects since March 2004
 Over 5,500 new jobs
 New investment over a half billion

CITY OF DANVILLE ANNOUNCEMENTS MARCH 2004 – PRESENT

DATE	COMPANY	BUSINESS SECTOR	JOBS	INV (M)
Mar-04	Luna nanoWorks	Manufacturer of carbonaceous nanomaterials	54	\$6.00
Apr-04	Televista	Service, inbound technical support	500	\$2.00
May-04	Bescov's	Retail, department store	350	\$9.00
Jul-04	Columbia Flooring	Manufacturer of hardwood products	250	\$13.50
Oct-04	Kellogg-Celotex	Manufacturer of soft board	145	\$1.00
Nov-04	Nestle	Manufacturer of cookie dough	50	\$8.00
Nov-04	Shorewood Packaging Corporation	Manufacturer of printed packaging products	30	\$10.00
Nov-04	Hebby Lobby	Retail, hobby & crafts	50	NR
Feb-05	Yorktowne Cabinetry, Inc.	Manufacturer of semi-custom cabinets	540	\$19.00
Apr-05	TWM Cabling Solutions, Inc.	Manufacturer of cable assemblies	50	\$1.00
Apr-05	Eesel Propack	Manufacturer of laminated and plastic tubes	40	\$15.00
Jun-05	EIT, Inc.	Manufacturer of electronics, circuit boards	120	\$12.30
Oct-05	Harley Davidson	Retail	18	\$1.00
Jan-06	Televista	Service, inbound technical support	250	\$1.10
Feb-06	Piedmont Precision Machine Co.	Manufacturer of components and machines	50	\$2.50
Feb-06	Usarco	Manufacture and repair of shopping carts	104	\$9.00
Apr-06	Armet Armored Vehicles	Manufacture of armored vehicles	60	\$0.80
Apr-06	North American Properties	Retail - Power Center	1,050	\$60.00
May-06	Airida Tubes	Manufacturer of extruded plastic tubes	145	\$24.00
Jun-06	Sam's Club	Retail, club	150	NR
Oct-06	Shorewood	Manufacture of furniture	740	\$281.00
Nov-06	Office Depot	Retail, office supplies	28	NR
Nov-06	PetSmart	Retail, pet supplies	40	NR
Nov-06	Corning	Manufacture of glass products	50	\$12.00
TOTALS			5,554	\$489.90

Technical Education

- Working with Danville Community College to develop a 2-year technician program in the Manufacturing Engineering Technology Program

DCC DRAFT CURRICULUM for NANOTECHNOLOGY TECHNICIANS

General Education – 18 credits			Content, Skills, and Knowledge – 26 credits		
ENG 111	College Composition I	3	BUS 195	Business Ethics	1
PHI 100	Intro to Philosophy	3	MEC 111	Materials for Industry	3
PSY 126	Psychology for Business and Industry	3	IND 181	World Class Manufacturing	3
ECO 120	Survey of Economics	3	IND 195	Fundamentals of Nanoscience I	3
MTH 103	Applied Technical Math	3	IND 295	Fundamentals of Nanoscience II	3
HLT 116	Personal Wellness	2	IND 295	Nanomaterials	3
STV 100	Orientation	1	CHM 111	College Chemistry I	4
			CHM 112	College Chemistry II	4
			IND 290	Coordinated Internship	2
Technical Foundations – 19 credits					
BIO 100	Basic Human Biology	3	AAS Degree in Technical Studies – 69 credits		
IST 117	Intro to Microcomputer Software	3			
IST 118	Intro to Microcomputer Software Lab	1			
MAC 150	Intro to Computer Aided Manufacturing	3			
ENG 131	Technical Report Writing	3			
IND 235	Statistical Quality Control	3			
IND 137	Teamwork & Problem Solving	3			

Luna nanoWorks' Division

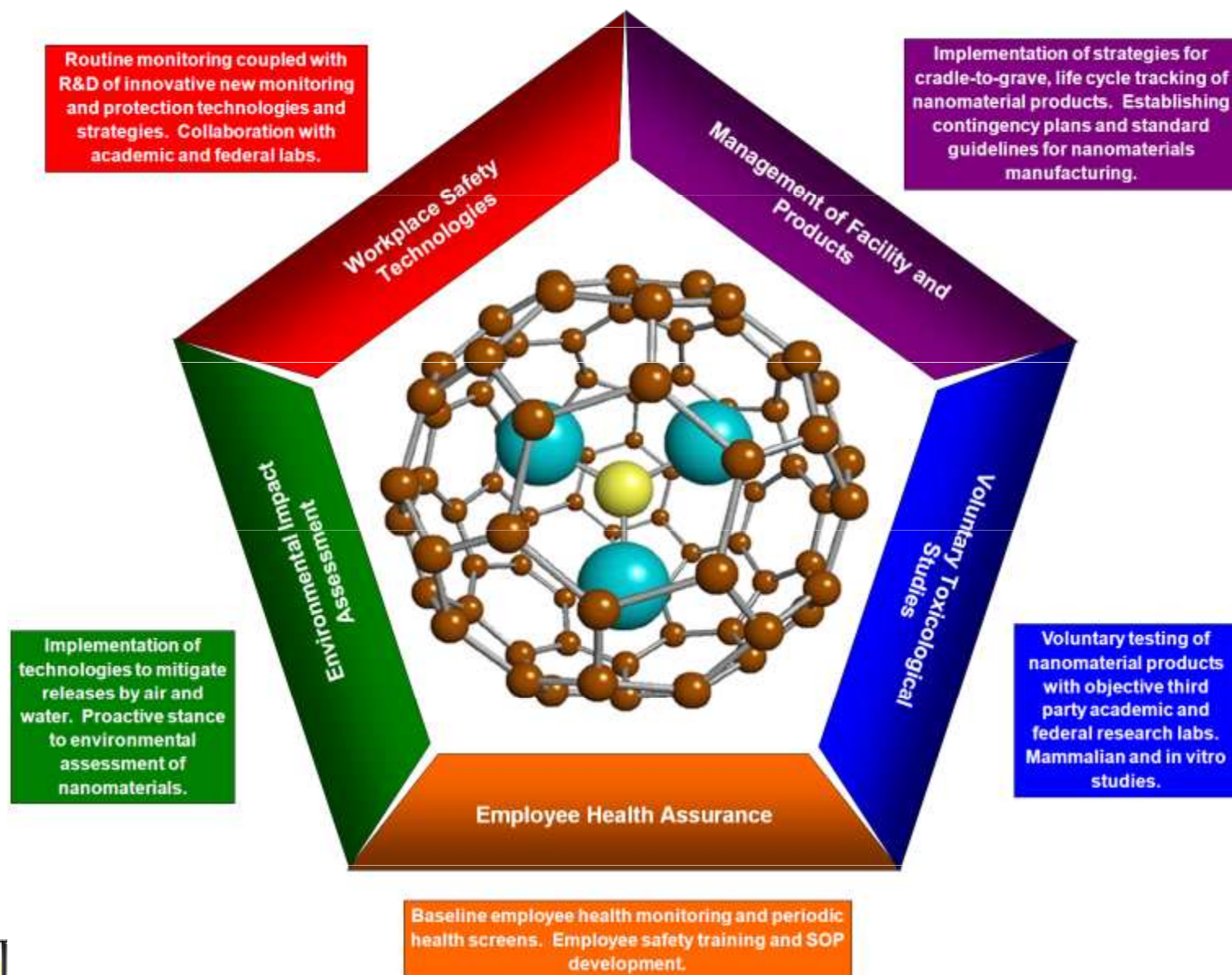


**Making products
empowered
by nanomaterials**



“Luna Innovations Incorporated has established an active program developing unique nanomaterials as commercial products serving multiple industries. As we produce and adapt these new materials, we proactively identify potential hazards and seek to minimize exposure through process engineering with the intent to protect our workforce and neighbors from harm....”

Luna EHS Program

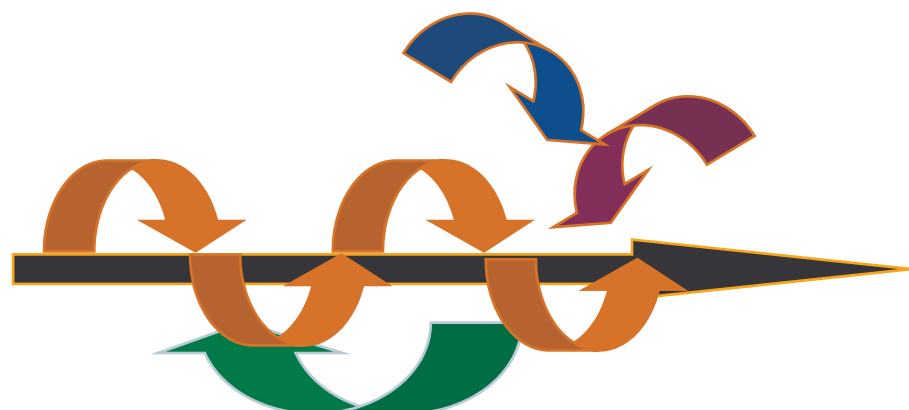


NNI- Nanotechnology Related EHS Strategy

NATIONAL
NANOTECHNOLOGY
INITIATIVE



Evaluating Research: A Dynamic and Iterative Process



Research Need	Research Goal	Research Strategy	Research Approach	Research Methodology	Research Tools	Research Timeline
Research Need 1: Develop methods to detect nanomaterials in biological matrices, the environment, and the workplace	Research Goal 1: Understand how chemical and physical modification affect the properties of nanomaterials	Research Strategy 1: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Approach 1: Develop automated microscopic methods for the rapid analysis of nanomaterials	Research Methodology 1: Evaluate correlation of microscopic methods with other size measurement techniques	Research Tools 1: Evaluate or modify microscopic and mass spectrometric approaches for determination of shape and structure of nanomaterials	Research Timeline 1: Evaluate methods beyond isothermal adsorption for nanomaterial surface area determination
Research Need 2: Understand how chemical and physical modification affect the properties of nanomaterials	Research Goal 2: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Strategy 2: Develop automated microscopic methods for the rapid analysis of nanomaterials	Research Approach 2: Develop correlation of microscopic methods with other size measurement techniques	Research Methodology 2: Evaluate or modify microscopic and mass spectrometric approaches for determination of shape and structure of nanomaterials	Research Tools 2: Evaluate methods beyond isothermal adsorption for nanomaterial surface area determination	Research Timeline 2: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area
Research Need 3: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Goal 3: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Strategy 3: Develop automated microscopic methods for the rapid analysis of nanomaterials	Research Approach 3: Develop correlation of microscopic methods with other size measurement techniques	Research Methodology 3: Evaluate or modify microscopic and mass spectrometric approaches for determination of shape and structure of nanomaterials	Research Tools 3: Evaluate methods beyond isothermal adsorption for nanomaterial surface area determination	Research Timeline 3: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area
Research Need 4: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Goal 4: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Strategy 4: Develop automated microscopic methods for the rapid analysis of nanomaterials	Research Approach 4: Develop correlation of microscopic methods with other size measurement techniques	Research Methodology 4: Evaluate or modify microscopic and mass spectrometric approaches for determination of shape and structure of nanomaterials	Research Tools 4: Evaluate methods beyond isothermal adsorption for nanomaterial surface area determination	Research Timeline 4: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area
Research Need 5: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Goal 5: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area	Research Strategy 5: Develop automated microscopic methods for the rapid analysis of nanomaterials	Research Approach 5: Develop correlation of microscopic methods with other size measurement techniques	Research Methodology 5: Evaluate or modify microscopic and mass spectrometric approaches for determination of shape and structure of nanomaterials	Research Tools 5: Evaluate methods beyond isothermal adsorption for nanomaterial surface area determination	Research Timeline 5: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area



Advancing
NNI EHS
Research for
the Next
Decade

Research Need	Near-Term Research 0-5 yrs	Mid-Term Research 5-10 yrs	Long-Term Research >10 yrs
Research Need 1: Develop methods to detect nanomaterials in biological matrices, the environment, and the workplace			
Research Need 2: Understand how chemical and physical modification affect the properties of nanomaterials			
Research Need 3: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			
Research Need 4: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			
Research Need 5: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			
Research Need 6: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			
Research Need 7: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			
Research Need 8: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			
Research Need 9: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			
Research Need 10: Develop methods for standardizing assessment of particle size, size distribution, shape, structure, and surface area			





inspired by ideas...driven by markets

